

Appn No. 10/667,175
Amdt. Dated July 15, 2004
Response to Office action of May 04, 2004

5

REMARKS/ARGUMENTS

The Applicant thanks Examiner for the detailed Office Action dated May 4, 2004. In response to the issues raised, the Applicant proposes the enclosed amendments and offers the following submissions.

Claims 1 and 8 - 35 USC §102 Novelty

Claims 1 and 8 stand rejected for lack of novelty in light of US 6,008,776 to Yarbrough et al.

The Applicant respectfully disagrees. It is well established that a claim lacks novelty if the cited reference teaches all the claim limitations. Amended claim 1 defines, *inter alia*, "an elongate electrothermal actuator having a fixed end that is fast with the substrate" and "a heat sink is positioned for direct thermal contact intermediate the ends of the actuator". Neither of these features appear in Yarbrough. The Examiner has equated the feed beam 47 of Yarbrough with the electrothermal actuator of the present invention. The feed beam 47 is a polysilicon narrow beam hinged to the substrate.

The Applicant submits that the ordinary worker in this field would not consider the polysilicon beam 47 to fall within the scope of the term "electrothermal actuator". Furthermore, the end 47b of the beam 47 is not "a fixed end that is fast with the substrate" but rather forms a freely moveable hinge with the substrate.

Finally, the beam 47 clearly does not have "a heat sink is positioned for direct thermal contact intermediate the ends of the actuator".

From the above, it is clear that Yarbrough fails to anticipate the present invention.

Claims 1 to 49 – 35 USC §103 Obviousness

Claims 1 to 3 and 8 stand rejected as obvious in light of US 6,438,954 to Goetz in light of Yarbrough.

The Applicant respectfully submits that the present invention is non-obvious in light of the cited references.

A claim is rendered obvious by the disclosures of two or more documents if:

- i.) there is some suggestion or motivation in the citations or the general knowledge of the skilled artisan to combine the separate teachings;
- ii.) the skilled artisan must have a reasonable expectation that the combination of the citations will successfully yield the claimed invention; and
- iii.) the combined teachings of the citations must disclose all the claimed features.

Appln No. 10/667,175
Amtd. Dated July 15, 2004
Response to Office action of May 04, 2004

6

Applicant submits that the citations fail to satisfy the above criteria. Neither Goetz nor Yarbrough have any disclosure of "a heat sink is positioned for direct thermal contact intermediate the ends of the actuator to disperse excessive heat build-up in the actuator". Likewise, neither reference recognizes the problem of inconsistent heating along the length of the actuator or allude to any mechanism for making actuator heating more uniform. With no suggestion or recognition of the problem addressed by the present invention, the skilled worker in this field would not have looked to satellite communication technologies (Yarbrough) and then incorporated Goetz for a solution to the inconsistent heating issue.

In light of the above, the ordinary worker in this field would:

- i) lack motivation to combine the cited references;
- ii) have no expectation that such a combination would successfully produce the present invention; and,
- iii) not be taught all the claimed features even if the citations were combined.

Therefore, claims 1 to 8 are clearly not obvious in light of Goetz in view of Yarbrough.

Obviousness-type Double Patenting

Claims 1 to 8 stand rejected as not patentably distinct from the claims of the present Applicant's US 6612110, 6439693 and 6364453, in view of Yarbrough.

The Applicant submits that claims 1 to 8 are patentably distinguished from the claims of US 6612110, 6439693 and 6364453. Furthermore, as discussed above, Yarbrough does not disclose "a heat sink is positioned for direct thermal contact intermediate the ends of the actuator". Therefore, any combination of the referenced patents to the Applicant, with Yarbrough, would not yield the combination of features defined by amended claim 1. Accordingly, the exclusive rights sought by claims 1 to 8 do not constitute an unjustified or improper timewise extension of patent rights.

Appln No. 10/667,175
Amdt. Dated July 15, 2004
Response to Office action of May 04, 2004

7

It is respectfully submitted that the Examiner's rejections and objections have been successfully traversed. Accordingly, reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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